US Army Corps of Engineers®
Engineer Research and Development Center

Coastal Field Data Collection
The Integrated Ocean Observing System:
an inter-agency program

Problem

Successful design, construction, operation, and maintenance of coastal projects requires climatological or real-time environmental data. Traditionally the Corps has collected only long-term wave data. However, the requirements of regional sediment management and a pro-active stance on the environment require the monitoring of many other parameters (climate change, currents, turbidity, salinity, water quality, habitat etc.). These data are not normally available, nor are data on ambient variation (i.e. natural fluctuations in served turbidity). To expand the spatial and temporal coverage and number of observed variables available, the Corps' is participating in the development of the Integrated Ocean Observing System or IOOS, an inter-agency activity under the Joint Subcommittee of Ocean Science and Technology (JSOST) and a recommendation of the President's *Ocean Action Plan.*

Research Approach

The IOOS is developing though integration of existing observations and through expansion to fill gaps. Federal agencies are supplying a *National Backbone* of observations (i.e. deepwater buoys, wave gauges, tide gauges, stream gauges, etc). Ten regional associations have been established to serve local users through observations and modeling. The IOOS is an end-to-end system including observing, modeling, data discovery and online delivery, education and outreach. Implementation of data standards will allow users to easily locate and access IOOS data streams and to develop customized products and displays. Through this work unit, the USACE is participating in the development of IOOS and insuring that the program is responsive to Corps' requirements. Opportunities exist for USACE Districts to participate, and Districts are encouraged to join their local IOOS regional association.

Labs/others involved

The national IOOS lead is NOAA. There are 18 other agencies including Navy, USGS, NSF, NASA, and DHS, along with the IOOS regional and national associations.

Final Products

A developing rich array of real-time and archived data sets will be available online along with readily available tools for data analysis and display. Focus is initially on 6 variables (water level, ocean temperature, salinity, ocean color, currents, and waves) with many others to follow.

Point of Contact

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IOOS website: http://ocean.us which will link to the 10 regional association websites.